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blotted out the more delicate beauties of the sky. Later, the Zodiacal Light loomed up conspicuously in the west, but in the east the "Gegenschein," or "counter-glow," was obscured by the combined glory of ***Mars*** and ***Antares***, low down on the horizon, and of ***Jupiter***, still below it. I was surprised to see what a monopoly we had of the brighter stars and constellations, and the display was one which would not only fire an amateur astronomer with enthusiasm, but might well overcome the apathy of the most professional of professionals. And thus, after a pleasant acquaintance of two years' duration, we bade farewell to the stars of the southern sky.

CORRIGENDA TO v. OPPOLZER'S "LEHRBUCH ZUR BAHNBESTIMMUNG DER KOMETEN UND PLANETEN."

By Armin O. Leuschner.

I have the honor to communicate to the Society a list of corrigenda to v. Oppolzer's "*Lehrbuch zur Bahnbestimmung der Kometen und Planeten.*" This work is now and will long remain a standard book upon the subjects which it treats, not only for the learner, but also for the practiced computer. It is therefore a matter of some importance as well as of great convenience to have the text freed of misprints and other errata.

The work consists of two volumes; and of volume I, two editions have been printed,—namely, the first edition in 1870, and the second in 1882. Volume II is still in its first edition, and was published in 1880.

Each volume contains a table of the errata detected during the passage of the work through the press. In 1880 Professor v. Oppolzer printed a long list of corrections to volume II. This list may be obtained by application to the publisher (W. Engelmann, of Leipzig). The present paper takes no account of the lists just mentioned, since they are available to every one who owns the work. Since 1880 corrigenda by various astronomers have appeared, from time to time, in the *Astronomische Nachrichten*, and for convenience I have collected these, and they are printed in what follows, with a

reference to the author's name and to the number of the *Astr. Nachr.* in which the errata first appeared. For those errata not so marked I am myself responsible. The present paper was also sent to the *Astr. Nachr.*, but Professor KRUEGER considered that it might better be printed elsewhere.

Owing to the extreme kindness of Dr. F. K. GINZEL, of the Royal Observatory at Berlin, who has been closely connected with the publication of the *Bahnbestimmungen*, and who, upon my request, has revised this paper, I venture to say that few, if any, errors remain in the present series. Dr. GINZEL was in the possession of a number of additional corrigenda which, before Prof. v. OPPOLZER'S death, had become known to his assistants. They are printed below among the others, so that the present and Prof. v. OPPOLZER'S series contain all errors so far known. I take great pleasure in expressing here my most sincere thanks to Dr. GINZEL for the interest he has shown in regard to this paper.

As volume II was published before the second edition of volume I, the references of the former volume are necessarily to the *first edition* of the latter. In general this produces no serious inconvenience, owing to the "Table of References" prefixed to the second edition of volume I, which gives the pages, etc., of this second edition which correspond to the pages, etc., of the first. In one case, however, a slight inconvenience arises,—namely, in volume II, page 398, where the reader is referred to the first edition of the earlier volume (which, very likely, is not available to him), while in the second edition of that volume the formulæ referred to have been omitted. It seems, therefore, to be worth while to deduce the necessary formulæ here which may be done as follows :

The following is the form of the equation from which the formulæ may be derived (vol. I, 2d ed., p. 65) :

$$\frac{kt\sqrt{1+e}}{2q^{\frac{3}{2}}} = \tau \left\{1 - \frac{2}{3}\epsilon\tau^2 + \frac{3}{5}\epsilon^2\tau^4 - \frac{4}{7}\epsilon^3\tau^6 + \dots\right\} + \frac{\tau^3}{3}\left\{1 - \frac{6}{5}\epsilon\tau^2 + \frac{9}{7}\epsilon^2\tau^4 - \frac{12}{9}\epsilon^3\tau^6 + \dots\right\}, \quad \text{(I)}$$

where $\tau = \text{tang}\,\frac{1}{2}\,v$ and $\epsilon = \dfrac{1-e}{1+e}$.

Introducing the quantity θ which is defined by the relation :

$$\text{tang}^2\,\frac{1}{2}\,v = \tau^2 = \frac{\theta}{\epsilon}, \qquad \text{[A]}$$

we obtain

$$\frac{kt\sqrt{1+e}}{2q^{\frac{3}{2}}} = \sqrt{\frac{\theta}{\epsilon}}\left\{1 - \frac{2}{3}\theta + \frac{3}{5}\theta^2 - \frac{4}{7}\theta^3 + \ldots\right\}$$

$$+ \frac{1}{3}\left\{\frac{\theta}{\epsilon}\right\}^{\frac{3}{2}}\left\{1 - \frac{6}{5}\theta + \frac{9}{7}\theta^2 - \frac{12}{9}\theta^3 + \ldots\right\}\cdot \quad \text{(II)}$$

Multiplying both sides by $\frac{2(1-e)^{\frac{3}{2}}}{1+e}$ we easily derive

$$\frac{kt(1-e)^{\frac{3}{2}}}{q^{\frac{3}{2}}} = 2\sqrt{\theta}\left\{1 - \frac{1}{3}\theta + \frac{1}{5}\theta^2 - \frac{1}{7}\theta^3 + \ldots\right\}$$

$$- 2e\sqrt{\theta}\left\{1 - \theta + \theta^2 - \theta^3 + \theta^4 - \ldots\right\}\cdot \quad \text{(III)}$$

If we now put

$$\left.\begin{aligned} \alpha &= 2\sqrt{\theta}\left\{1 - \frac{1}{3}\theta + \frac{1}{5}\theta^2 - \frac{1}{7}\theta^3 + \ldots\right\} \\ \beta &= 2\sqrt{\theta}\left\{1 - \theta + \theta^2 - \theta^3 + \theta^4 - \ldots\right\} \end{aligned}\right. \quad \text{[B]}$$

we finally have
$$\frac{kt(1-e)^{\frac{3}{2}}}{q^{\frac{3}{2}}} = \alpha - e\beta\cdot \quad \text{(IV)}$$

This is the form of equation (I), vol. I, page 65 (2d ed.) in which it appears in the first edition of that volume (page 60). I can now proceed with Prof. v. OPPOLZER's own demonstration:

Since $(1-e)$ is a quantity of the first order, θ must be of the same order since we assumed

$$\theta = \epsilon \operatorname{tang}^2 \frac{1}{2} v\cdot$$

(GAUSS, in his investigations, assumes $\sqrt{\theta}$ to be of the first order.) It can easily be shown that α and β bear the same relation to each other as the arc to the sine. Furthermore, in our case, we shall always have very nearly

$$\alpha = e\beta.$$

Hence, equation (IV) as it stands is not now adapted to solution. Many transformations can be made which all lead to the result that the computation of this difference may be effected with sufficient accuracy by means of the ordinary logarithmic tables. The following transformation, suggested by GAUSS, has the advantage that a quantity B (which will be derived below) may be put equal to unity without introducing errors greater than of the second order (according to GAUSS's determination of errors, of the fourth order).

We shall have

$$\alpha - e\beta = \frac{1-e}{10}(9\alpha + \beta) + \frac{1+9e}{10}(\alpha - \beta).$$

If we put

$$A = 15 \frac{\alpha - \beta}{9\alpha + \beta} \qquad [C_I]$$

we may write

$$\frac{kt\sqrt{1 - e}}{q^{\frac{3}{2}}} = \frac{9\alpha + \beta}{10}\left\{1 + \frac{1 + 9e}{1 - e} \cdot \frac{A}{15}\right\}.$$

Introducing now

$$B = \frac{9\alpha + \beta}{20\sqrt{A}} \qquad [C_{II}]$$

which quantity, as can be proven, differs from unity by a quantity of the second order only, we obtain

$$\frac{kt\sqrt{1 - e}}{2\,q^{\frac{3}{2}}} = B\left\{A^{\frac{1}{2}} + \frac{1 + 9e}{1 - e} \cdot \frac{A^{\frac{3}{2}}}{15}\right\}.$$

If we assume that

$$A = \frac{5\,(1 - e)}{1 + 9e} \cdot \text{tang}^2 \frac{1}{2} w,$$

the equation becomes

$$\frac{kt}{2\,B q^{\frac{3}{2}}}\sqrt{\frac{1 + 9e}{5}} = \text{tang} \frac{1}{2} w + \frac{1}{3} \text{tang}^3 \frac{1}{2} w \cdot \qquad [D]$$

Assuming B to be known, and placing with Nicolai

$$\theta = A\,C^2 = C^2 \frac{5\,(1 - e)}{1 + 9e} \text{tang}^2 \frac{1}{2} w, \qquad [C_{III}]$$

we get

$$\text{tang} \frac{1}{2} v = C \,\text{tang} \frac{1}{2} w \sqrt{\frac{5\,(1 + e)}{1 + 9e}}, \qquad [E]$$

since

$$\text{tang}^2 \frac{1}{2} v = \frac{1 + e}{1 - e}\,\theta \cdot$$

It is not necessary to go any further. After the substitution of the relations [A], [B], [C], [D], [E] in the differential-coefficients on page 398, there remain as unknown quantities only the quotients $\frac{B}{C}$ and $\frac{B}{C^3}$. The expansion of these quantities, however, is given on page 398 *et seq.*

The following *additions and corrections* are to be made to the "Table of References" preceding volume I, second edition.

TABLE OF REFERENCES.

Vol. II.	Reference to the first edition of Vol. I.	Reference to the second edition of Vol. I.
Page 84	Page 47, 48 and 17	Page 54, 57 and 18
" 167	" 28	" 29 ff
" 228	" 81	" 206, 24)
" 229	" 9	" 9, 2)
" 371	" 94	" 268
" 374	" 40	" 44, 1)
" 377	" 71 and 32	" 123 and 35, 30)
" 381	" 84	" 213
" 411	" 81	" 206
" 430	" 109	" 98, 16)
" 432	" 44	" 50
" 464	" 218	" 81
" 473	" 143	" 103, 7)
" 478	" 188	" 82, 8)
" 492	" 106, 3)	" 292, 9)

CORRIGENDA TO VOLUME I (SECOND EDITION).

†Page 12. Line −19, *for* "Ekliptikal coordinaten" *read* "Aequatoreal coordinaten".
* " 29. " − 8, *for* "ϕ" *read* "y".
" 56. " − 1, *for* "tg $(45 + \frac{1}{2}\phi)$" *read* "tg $(45^\circ + \frac{1}{2}\phi)$".
" 71. " − 5, *for* "wol" *read* "wohl".
" 83. " − 1, *for* "$\genfrac{}{}{0pt}{}{1}{a}$" *read* "$\frac{1}{a}$".
* " 95. " +18, *for* "pag. 43" *read* "pag. 44".
* " 97. " + 4, *for* "pag. 104" *read* "pag. 81".
" 111. " −10, *for* "sin ϕ'" *read* "cos ϕ'".
" 111. " − 3 and −4, *for* "cos ϕ" *read* "cos ϕ'".
* " 114. " − 2, in the foot-note after $\pm$ 1.08 *insert* "mit".
* " 117. " − 8, *for* "sin π_0, cos π_0" *read* "sin π_0', cos π_0'".

	Page 127.	Line — 2,	in the first equation *for* "Σ m x" *read* "Σ m y"; in the second *for* "Σ m y" *read* "Σ m x".
	" 127.	" — 1,	the first equation should *read* "$\frac{d^2x,}{dt^2} \Sigma m z = o$"; the second "$\frac{d^2y,}{dt^2} \Sigma m z = o$".
	" 128.	" + 3 and + 4,	the equations should *read* "$\frac{d^2z,}{dt^2} \Sigma m x = o$" and "$\frac{d^2z,}{dt^2} \Sigma m y = o$".
	" 142.	" + 1,	*for* "(pag. 139)" *read* "(pag. 134)".
*	" 146.	" + 7,	*for* "strenge" *read* "strengen".
	" 156.	" — 9,	*for* "n^2" *read* "n".
*	" 158.	" —14,	*for* "180° — (II)" *read* "180° — (II) + ψ".
*	" 164.	" + 4,	after 20) *insert* "nachdem sie mit cos b_1', resp. sin b_1' multiplicirt worden sind".
	" 164.	" — 1 and —9,	*for* "pag. 162" *read* "pag. 145".
*	" 199.	" — 8,	*for* "der Null gleich wird" *read* "den Werth 280° annimmt".
*	" 217.	" +18,	after "ermitteln" *insert* "hierbei ist $\Delta\epsilon$ das Increment der lunisolaren Schiefe in der Zeit ($t_1 - t_0$)".
	" 218.	" —18,	*for* "β" *read* "β_1".
	" 221.	" — 7,	*for* "$\Delta\delta_0$" *read* "$\Delta\alpha_0$"
*	" 225.	" +13,	*for* "cos 2a" *read* "cos 2α".
‡	" 238.	" + 6,	*for* "9″2365" *read* "9″2370".
*	" 241.	" +11,	*for* "erste Tafel" *read* "zweite Tafel".
*	" 241.	" +12,	*for* "zweite Tafel" *read* "erste Tafel".
*	" 242.	" —15,	*for* "pag. 114, 115" *read* "pag. 118".
*	" 246.	" — 3,	*for* "pag. 120" *read* "pag. 123".
*	" 248.	" — 9,	*for* "pag. 245" *read* "pag. 237, 238".
*	" 258.	" — 8,	*for* "$\alpha - a_0$" *read* "$\alpha - \alpha_0$".
	" 276.	" +20,	*for* "pag. 272" *read* "pag. 276".
	" 280.		Equation 10) on the left-hand side omit the "minus-sign".
*	" 293.	Line — 9,	*for* "das Zeichen von cos θ erhaelt" *read* "im ersten Quadranten zu nehmen sein wird, da sin ϕ immer positiv ist".
*	" 322.	" +14,	*for* "3″26" *read* "32″6".
*	" 338.	" +13,	*for* "Sonnenort" *read* "Kometenort".
*	" 338.	" +14,	*for* "Aberrationscorretion" *read* "Aberrationscorrection".
	" 363.	" + 8,	*for* "$\frac{dy}{dx}$" *read* "$\frac{dy}{dz}$".

Page 363. Line +18 and +19, *for* "x" *read* "z".

" 363. " +11, *for* "derselben" *read* "desselben".

" 370. " − 4, *insert* "$d y_e =$".

" 372. " + 1, *for* "2 ,f" *read* "2 f,".

" 372. " +15, *for* "$n_{\prime\prime}$" *read* "n".

* " 373. " + 2, *for* "pag. 98" *read* "pag. 101".

" 373. " +18, *for* "ersten" *read* "erste".

* " 276. " +11, } both terms must have the coefficient "$-\frac{1}{2}$".
* " 376. " − 4, }

* " 382. " −13, *for* "$I A_5$)" *read* "$I A_4$)".

* " 412. " + 2, *for* "pag. 72" *read* "pag. 73".

* " 414. " − 4, *for* "cos J" *read* "− cos J".

" 417. " + 3, omit the word "diese".

* " 421. " −14, *for* "die mit x^2 multiplicirten Glieder" *read* "die Glieder 3. Ordnung".

* " 423. " +16, both terms must have the coefficient "$-\frac{1}{2}$".

* " 439. " + 5, *for* "$\eta_{\prime\prime}$" *read* "$\eta_{\prime\prime} - 1$".

§ " 478. Argument: 41° 6′ 40″, *for* "87474" *read* "88474".

§ " 523. " 615.5 (Fusstafel), *for* "397.5" *read* "307.5".

§ " 532. " 148° 30′ 20″, *for* "00795" *read* "$\bar{0}0795$".

§ " 535. " 155° 24′ 40″, *for* "$\bar{0}6898$" *read* "06898".

§ " 538. " 160° 28′ 50″, *for* "$8112\bar{0}$" *read* "81120".

§ " 538. " 161° 32′ 60″, *for* "$9\bar{0}293$" *read* "90293".

§ " 542. " 169° 30′ 40″, *for* "$0\bar{2}767$" *read* "$\bar{0}2767$".

§ " 586. " 50.0 [col.: Parallaxe], *for* "88″.17" *read* "8″.817".

§ " 610. " 77.6 [col.: $(\mathrm{g} \cos G)_I$], *for* "$\begin{Bmatrix} + 20.17 \\ + \ \ 0.12 \end{Bmatrix}$" *read* "$\begin{Bmatrix} + 20.174 \\ + \ \ 0.127 \end{Bmatrix}$".

§ " 610. " 77.7 [col.: $(\mathrm{g} \cos G)_I$], *for* "+ 0.53" *read* "+ 0.153".

‡ Table X_b, column ϵ_{II}, and table X d, column B_{II}, are computed with an erroneous value; the resulting error, however, is of no great consequence, since it never exceeds half a unit of the last decimal. It may be taken into account with great accuracy by using in these two columns for the calculation of the secular terms the factor $t = \frac{t_0 - 1850}{100}$ for the factor $t = \frac{t_0 - 1900}{100}$.

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* Communicated by Dr. F. K. GINZEL. ‡ Prof. Dr. v. OPPOLZER (?), *Astr. Nachr.* 2492.
† Dr. Paul LEHMANN, *Astr. Nachr.* 2810. § Dr. Prof. ERN. PASQUIER, *Astr. Nachr.* 2719.

CORRIGENDA TO VOLUME II.

Page 10. Line + 4, *for* "$C^{d-p} \left\{ \left\{ 1^2, 3^2, \ldots. (2d-1)^2 \right\}\right.$" *read* "$C^{d-p} \left\{ 1^2, 3^2, \ldots. (2d-1)^2 \right\}$".

" 10. " − 7, *for* "$4 d \delta \sum_{p=0}^{p=\delta} \ldots.$" *read* "$4 d \delta \sum_{p=0}^{p=\delta} \ldots.$"

" 11. " +10, *for* "p = d" *read* "p und d".

" 11. " +14, *for* "$\frac{d}{2^{2d}}$" *read* "$\frac{d}{2^{2d-2}}$".

" 12. " − 7, *for* "$2^{(2d-p)}$" *read* "$2^{2(d-p)}$".

" 15. " − 9, *for* "wie dies in Gleichung 4)" *read* "wie dies in Gleichung 4), pag. 9".

" 15. " − 7, *for* "$m f (a + [i + \frac{1}{2}] w)$" *read* "$m f^I (a + [i + \frac{1}{2}] w)$".

" 15. " − 4, *for* "$f (a + [i + \frac{1}{2}] w$" *read* "$f (a + [i + \frac{1}{2}] w)$".

" 18. " − 8, *for* "$-\frac{C^3\{1^2, 5^2\}}{2^6}$" *read* "$-\frac{C^3\{1^2, \ldots 5^2\}}{2^6}$".

" 32. " − 8, *for* "$d l = d (a + [i + n] w) + d (a + [i + \frac{1}{2} + m] w)$" *read* "$d l = d (a + [i + n] w) = d (a + [i + \frac{1}{2} + m] w)$".

" 34. " + 3, *for* "$\sum_{a=1}^{d=\infty} \ldots$" *read* "$\sum_{d=1}^{d=\infty} \ldots.$".

" 34. " + 7, *for* "$C^{d-p} \left\{ 1^2, 3^2 \ldots. (2d-1)^2 \right)$" *read* "$C^{d-p} \left\{ 1^2, 3^2 \ldots (2d-1)_2 \right\}$".

" 35. " + 13, *for* "B^I" *read* "B_I".

" 39. " − 3, *for* "$n^3 \atop 1.2.3$" *read* "$\frac{n^3}{1.2.3}$".

" 41. " +14, *for* "$\int^{a + [i + \frac{1}{2} m] w} f (l) d l$" *read* "$\int^{a + [i + \frac{1}{2} + m] w} f (l) d l$".

" 44. " +13, *for* "der Formeln" *read* "den Formeln".

" 45. " − 9, *for* "benütze" *read* "benützen".

" 47. " − 8, *for* "$^I f (a + \frac{1}{2} w)$" *read* "$^I f (a - \frac{1}{2} w)$".

" 50. " −13, *for* "aus den für 21)" *read* "aus den für 7)".

" 55. " −13, *for* "$J_I = \int^{a + iw} f (a + [i + n] w) d l$" *read* "$J_I = \frac{1}{w} \int^{a + iw} f (a + [i + n] w) d l$": the use of Formula B_I, page 35, is then clearer. Compare equations 2) and 4) page 32.

Page 56. After the first equation insert the number "34)".

" 59. Line + 2, *for* "$\frac{1}{2}\,{}^{\mathrm{I}}\mathrm{f}\,(a - \frac{1}{2}\,w]$" *read* "$\frac{1}{2}\,{}^{\mathrm{I}}\mathrm{f}\,(a - \frac{1}{2}\,w)$".

" 59. " − 6, *for* "$P_1^3\,(m)\,f^{III}\,(a - \frac{1}{2}\,w)$" *read* "$P_2^3\,(m)\,f^{III}\,(a - \frac{1}{2}\,w)$".

" 61. " + 6, *for* "$\log f\,(a + i\,w)$" *read* "$\log f^d\,(a + i\,w)$".

" 70. " + 13, *for* "$\frac{k\,m_1}{\rho^2}$" *read* "$\frac{k^2\,m_1}{\rho^2}$".

" 82.
" 86. The numerical values of the constants are somewhat different from those of the second edition of vol. I. See preface to same.

" 99. Line + 1, *for* "Rech nung" *read* "Rech-nung".

" 147. " − 8, *for* "$\frac{a_0^2 \cos \phi_0}{((r^2))}$" *read* "$\frac{a_0^2 \cos \phi_0}{((r))^2}$".

" 150. " − 3, *for* "$\tau' t \ldots$" *read* "$\tau' \ldots$".

" 151. " − 17, *for* "$[P_{-1} + P_0)$" *read* "$(P_{-1} + P_0)$"

" 151. " − 7, *for* "$(12\,\gamma - a\alpha)$" *read* "$(12\,\gamma + a\,\alpha)$".

" 153. " + 4, *for* "$\frac{d^2 \nu_{+1}}{d\,t^5}$" *read* "$\frac{d^2 \nu_{+1}}{d\,t^2}$".

" 154. " + 13, *for* "$f^{I}\,(a - \frac{1}{2}\,w]$" *read* "$f^{I}\,(a - \frac{1}{2}\,w)$".

" 159. " − 15, equation 7). Strictly speaking, we cannot here write "cos u′" for "cos u", since these formulæ are general, and the special case: cos J nearly = 1 is not as yet taken up.

" 165. " − 8, *for* "$\frac{z}{(r)}\,\frac{d\,z}{d\,t}$" *read* "$\frac{z}{((r))}\,\frac{d\,z}{d\,t}$".

" 174. " + 7, *for* "ω" *read* "ω_0".

" 175. " + 8, *for* "$\int\int^{a+i\,w} f\,(x)\,d\,x^2$" *read* "$\int\int^{a+[i \pm 1]\,w} f\,(x)\,d\,x^2$" (cf. page 233).

" 179. " + 4, *for* "$f^{III}\,(a - \frac{1}{2}\,\omega)$" *read* "$f^{III}\,(a - \frac{1}{2}\,w)$".

" 256. " − 7, *for* "mehr minder" *read* "mehr oder minder".

" 292. " − 7, *for* "$\left(\frac{2}{3}\right)^2 \int \ldots\ldots$" *read* "$\frac{(2)^2}{3} \int \ldots$".

" 301. " − 7, *for* "die Quadrate der Præcisionen" *read* "die Præcisionen".

" 308. " − 8, *for* "se" *read* "es".

" 314. " + 3, 4, 16, better "n" *for* "v".

" 326. " − 1, *for* "$(\alpha\,\beta)$" *read* "$[\alpha\,\beta]$".

* " 340. In the line $\log \frac{[c\,d_2]}{[c\,c_2]}$ *for* $\left\{\begin{matrix} \frac{[c\,d_2]}{[c\,c_2]}\,[c\,l_3] \\ \frac{[c\,d_2]}{[c\,c_2]}\,[c\,f_3] \end{matrix}\right\}$ *read* $\left\{\begin{matrix} \frac{[c\,d_2]}{[c\,c_2]}\,[c\,l_2] \\ \frac{[c\,d_2]}{[c\,c_2]}\,[c\,f_2] \end{matrix}\right\}$.

Page 343. In the second elimination-equation from bottom, *for* "064255" *read* "0.64255".

" 362. Line — 4, *for* "mehr minder" *read* "mehr oder minder".

" 383. Line + 5, *for* "Maasse" *read* "Masse".

† " 392. " — 6, *for* "$\delta\pi = p \sin(N - \pi_0) + \frac{1}{2} p^2 \sin 1'' \sin(2N - \pi_0) + ..$" *read* "$\delta\pi = p \sin(N - \pi_0) - \frac{1}{2} p^2 \sin 1'' \sin(2N - \pi_0) + \ldots$",

" 393. " + 3, *for* "Δe" *read* "δe".

" 394. " —16, *for* "$C = 180 - i$" *read* "$C = 180 - i'$".

" 408. " +15, *for* "§ 11" *read* "§ 2".

" 414. " + 4, *for* "$\cos \delta\delta\alpha : \sin i' \delta \Omega$" *read* "$\cos \delta\delta\alpha : \sin i' \delta \Omega'$".

" 431. " — 6, *for* "das ist" *read* "dass ist".

" 431. " — 3, *for* "$h' = \left(r_0 \frac{\delta r_0}{d\tau}\right)$" *read* "$h' = \left(r_0 \frac{d r_0}{d\tau}\right)$".

" 431. " — 1, *for* "$\frac{\delta h'}{d x_0}$ und $\frac{\delta h'}{d \xi_0}$" *read* "$\frac{\delta h'}{\delta x_0}$ und $\frac{\delta h'}{\delta \xi_0}$".

" 432. Equation 15) *for* "$\frac{\delta h'}{d x_0}$" *read* "$\frac{\delta h'}{\delta x_0}$".

" 435. Line +13, *for* "$\Sigma (x_a)^2$" *read* "$\frac{1}{2} \Sigma (x_a)^2$".

" 455. " —10, *for* "A)" *read* "A_I)".

" 458. " —18, *for* "ξ" *read* "ξ_0".

" 458. " —17, *for* "in B)" *read* "von B) in A_2)".

" 458. " —12, *for* "x" *read* "x".

" 458. " — 9, *for* "pag. 368" *read* "pag. 369".

" 459. " — 1, 2, 4, 5, *for* "$d\xi$ und dx" *read* "$\delta\xi$ und δx".

" 460. " + 1, *for* "$d\xi$ und dx" *read* "$\delta\xi$ und δx".

" 462. " + 1, *for* "17.96" *read* "47.96".

" 463. Column $\cos \beta \delta\lambda$, first line, *read* "$+ 0''04$" and column $\delta\beta$, second line, *read* "$- 0.70$".

" 466. " + 1, *for* "darf" *read* "dürfen".

" 469. " + 3, *for* "$\frac{(r + r')^{\frac{7}{2}}}{a}$" *read* "$\frac{(r + r')^{\frac{7}{2}}}{a^2}$".

§ " 488. " — 6 and —7, on the right-hand side of the equations, *for* "$\left(\frac{\delta \lambda_1}{\delta x}\right) \Delta x$ and $\left(\frac{\delta \lambda_2}{\delta x}\right) \Delta x$" *read* "$\left(\frac{\delta \beta_1}{\delta x}\right) \Delta x$ and $\left(\frac{\delta \beta_2}{\delta x}\right) \Delta x$".

" 491. " + 9, *for* "tag δ" *read* "tang δ".

LICK OBSERVATORY, April, 1890.

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* Communicated by Dr. F. K. GINZEL.

† Prof. Dr. A. SEYDLER, *Astr. Nachr.* 2856.

§ T. HACKENBERG, *Astr. Nachr.* 2899.

POSTSCRIPT.

After the preceding corrigenda were in print, a list of errata in volume II was published by Lieutenant-General J. F. TENNANT, R. E., F. R. S., in the *Monthly Notices* of the R. A. S. (Vol. L, No. 7). The following of these I have verified, and they are not contained in the present list, or in any previous one, so far as I know:

Page 11. Line +16, *for* "$C^{d-p}\left\{1, 2, 3, \ldots d-1\right\}$" *read* "$C^{d-p}\left\{1^2, 2^2, 3^2, \ldots (d-1)^2\right\}$".

" 110. Log. $S_{(x)}$, Oct. 27, *for* "$1_n861612$" *read* "$2_n861612$".

" 110. " $S_{(z)}$, Dec. 6, *for* "$0_n045547$" *read* "$0_n075547$".

" 163. Line − 4, *for* "$\frac{\sin\frac{1}{2}(E-E_0)}{\frac{1}{2}(E-E_0)}$" *read* "$\frac{\sin\frac{1}{2}(E-E_0)}{\frac{1}{2}(E-E_0)\sin 1''}$".

The remaining errata given by General TENNANT have either been previously printed or else I find myself unable to subscribe to their correctness.

While engaged in revising this list, I noticed the following additional errata in the computations, as printed on pages 110 and 111:

Page 110. Log z, Jan. 15, *for* "$9_n148099$" *read* "9.148099".

" 110. " z, Dec. 6, *for* "$9_n150349$" *read* "9.150349".

" 110. " z, Oct. 27, *for* "9.147436" *read* "9.148436".

" 111. " fqz, Oct. 27, *for* "$1_n733151$" *read* "1.733151".

" 111. $\Delta\Sigma$ (Z), Oct. 27, *for* "− 0.06" *read* "+ 0.62".

In *Astr. Nachr.*, No. 2968, cand. astr. H. KLOOCK, of Bonn, calls attention to a statement in volume I, regarding diurnal aberration, which is too general. The simplest way to remove the ambiguity is as follows:

Page 111. Line −17, *after* "Beobachtungen" *insert* "falls dieselben nicht gerade absolut sein sollten."

LICK OBSERVATORY, August, 1890.